Lee 2nd

The Journal OF THE South Carolina Medical Association

VOL. XIX. GREENVILLE, S. C., NOVEMBER, 1923 NO. 11

Medical College of S. C.

CONTENTS

EDITORIAL DEPARTMENT:

Southern Medical Great Success ---------- 635

Committee Appointments ---------- 637

ORIGINAL ARTICLES:

Practical Tonsil Hemostatics by J. W. Jervey, M. D., Greenville, S. C. ---------- 637

Hypernephroma by Marion H. Wyman, M. D., Columbia, S. C. ---------- 639

The Relative Value of Medical and Surgical Treatment of Duodenal and Gastric Ulcers by A. E. Baker, M. D., Charleston, S. C.---------- 642

(Contents continued on page ii.)

The Baker Sanatorium

Colonial Lake **Charleston, S. C.**

ARCHIBALD E. BAKER, M. D., F. A. C. S. Surgeon in Charge
ARCHIBALD E. BAKER, JR., M. D., Associate

A New and thoroughly equipped hospital for the care of Surgical patients.

Duodenal Ulcer with Reference to Acute Perforation by H. S. Black, M. D., Spartanburg, S. C. 646

The Technique of Spinal Anesthesia by C. M. Rakestraw, M. D., Chester, S. C. 648

UROLOGY DEPARTMENT 651

SURGERY DEPARTMENT 652

DERMATOLOGY AND SYPHILOLOGY DEPARTMENT 653

SOCIETY REPORTS 655

MINUTES 656

X-RAY AND RADIUM LABORATORY.

X-Ray Diagnosis and X-Ray and Radium Therapy

An ample supply of Radium, plaques, needles and capsules for the treatment of Benign and malignant conditions where such treatment is indicated.

DR. A. ROBERT TAFT
Charleston, S. C.
Riverside Infirmary. Baker Sanitarium.

MERCY MATERNITY HOSPITAL
Bee & Ashley Avenue
Charleston, S. C.
Miss A. McConnell, Supt.
Private institution for the care of obstetrical cases, including complication of pregnancy and the peurperium, and clean surgery on women.

The Journal
OF THE
South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.
Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, $3.00 **EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.**

ASSOCIATE EDITORS.

INTERNAL MEDICINE
GEORGE R. WILKINSON, M. D., Greenville, S. C.
PEDIATRICS
WM. P. CORNELL, M. D., Columbia, S. C.
OBSTETRICS AND GYNECOLOGY
R. E. SEIBELS, M. D., Columbia, S. C.
UROLOGY
MILTON WEINBERG, M. D., Sumter, S. C.
ROENTGENOLOGY
FLOYD D. RODGERS, M. D., Columbia, S. C.
PATHOLOGY AND BACTERIOLOGY
H. H. PLOWDEN, M. D., Department Pathology and Bacteriology, Medical College of State of S. C., Charleston, S. C.
SURGERY
S. O. BLACK, M. D., Spartanburg, S. C.
EYE, EAR, NOSE AND THROAT
W. C. TWITTY, M. D., Rock Hill, S. C.
DERMATOLOGY
J. RICHARD ALLISON, M. D., Columbia, S. C.
PUBLIC HEALTH
LEON BANOV, M. D., Health Officer Charleston County, Charleston, S. C.
ANAESTHESIA
J. B. TOWNSEND, M. D., Anderson, S. C.
NERVOUS AND MENTAL DISEASES
B. O. WHITTEN, M. D., Supt. Training School for the Feebleminded, Clinton, S. C.

EDITORIAL

SOUTHERN MEDICAL GREAT SUCCESS

The Southern Medical Association met as scheduled in Washington, D. C., Nov. 12 to 16. In many respects this was essentially a Public Health Meeting as the President, Dr. W. S. Leathers, is in charge of the Public Health for the State of Mississippi, and many papers and addresses at the meeting gave evidence of the great and broadminded interest that the physicians of the South are taking in the matter of Public Health.

The scientific papers in all the sections were exceptionally good and the physician who follows any specialty or does general work could find food for thought at any of the Sectional Meetings that he may have attended.

A reception was given to the ladies attending the meeting on Tuesday afternoon by Mrs. Woodrow Wilson, also a reception was given to them on Thursday morning by Mrs. Calvin Coolidge. A reception was also given to the physicians at a later hour Thursday, by President Coolidge at which he made a short talk expressing his interest in the medical profession and his desires for its advancement.

An interesting side feature of this Seventeenth Annual Session was a conference of Presidents and Secretaries of State Medical Associations and State Health Officers at which Dr. Geo. E. Vincent, President of Rockefeller Foundation gave

an address stressing the the responsibility of the medical profession to humanity. Mr. James A. Tobey of New York, Executive Secretary of National Health Council, gave an address on some practical suggestions for co-ordinated effort in the Campaign for Periodic Health Examinations. Dr. W. S. Rankin, State Health Officer for North Carolina made suggestions urging a closer relationship between County Medical Society and County Health Officer, stressing the point that the duties of both the physician and the county health officer were inseparable.

New Orleans was decided on as the next place of Meeting and Dr. Charles Minor of Asheville, N. C. was elected President.

The attendance at this meeting was unusually good and the Washington hotels had sufficient capacity to accomodate comfortably. There were about fifteen hundred physicians registered, about one hundred and fifty medical students and about five hundred ladies.

The attendance from South Carolina was very good. Among those registered were as follows:

SOUTH CAROLINA

Acker, H. H., Anderson.
Anderson, L. W., Dunbarton.
Banov, Leon, Charleston.
Black, W. C., Greenville.
Broadway, R. E., Sumter.
Cornell, Wm. P., Columbia.
Filby, E. L., Columbia.
Frontis, D. B., Ridge Spring.
Glover, S. G., Greenville.
Green, J. T., Ellam.
Gress, J. Decherd, Greenville.
Hayden, A. H., Columbia.
Hemingway, T. S., Kingstree.
James, F. G., Greer.
Jervey, J. W., Greenville.
Johnson, Francis B., Charleston.
Latimer, James B., Anderson.
Littlejohn, T. R., Sumter.
Mauldin, L. O., Greenville.
Mayr, H. W. C., Fair Play.
Miller, Jno. H., Cross Hill.
Moore, J. C., McColl.
McInnes, G. Fleming, Charleston.
Mardin, W. H., Anderson.
Neely, A. Theo, Newberry.
Nesbitt, J. N., Gaffney.
Riser, L. A., Columbia.
Salley, F. P., Union.
Sanders, J. L., Greenville.
Sanders, J. O., Anderson.
Sarratt, S. G., Union.
Simpson, W. E., Rock Hill.
Strauss, D. D., Bennettsville.
Stuckney, H. M., Sumter.
Taft, A. Robert, Charleston.
Thomas, P. D., Loris.
Tyler, G. T., Jr., Greenville.
Walker, Theron O., Greer.
Wilson, Robert, Jr., Charleston.
Young, C. H., Anderson.
Bailey, C. Williams, Spartanburg.
Bigger, I. A., Rock Hill.
Clark, Newton T., Spartanburg.
Cooper, Ernest.
Crook, Martin, Spartanburg.
Crosson, D. M., Leesville.
Dendy, W. R., Pelzer.
Dieterich, Frederick H., Charleston.
Doyle, E. C., Seneca.
Dulin, Thos. N., Clover.
Durham, F. M., Columbia.
Coan, W. P., Spartanburg.
Fike, A. R., Spartanburg.
Griffin, H. H., Columbia.
Hayne, James A., Columbia.
Hiert, H. G., Ehrhardt.
McElroy, Arthur P., Union.
McLeod, F. H., Florence.
Pollitzer, R. M., Charleston.
Roberts, Victor M., Blacksburg.
Smith, H. M., Columbia.
Smoot, D. Lesine, Spartanburg.
Stoddard, J. F., Pelzer.
Timmerman, W. P., Batesburg.
Wallace, W. R., Chester.
Weston, William, Columbia.
Williams, C. F., Columbia.
Wilson, G. Fraser, Charleston.
Wylie, A. M., Chester.

COMMITTEE APPOINTMENTS

The following committee appointments for the South Carolina Medical Association have been announced. Others will be noted in the next issue of the Journal:

On Public Policy and Legislation: Dr. M. H. Wyman, Chairman, Columbia; Dr. P. V. Mikell, Columbia; Dr. D. M. Crosson, Leesville.

On Constitution and By-Laws: Dr. E. A. Hines, Chairman, Seneca; Dr. C. B. Earle, Greenville; Dr. C. W. Kollock, Charleston.

On Necrology: Dr. J. C. Harper, Chairman, Greenwood; Dr. J. L. Bolt, Easley; Dr. J. S. Stribling, Seneca.

ORIGINAL ARTICLES

PRACTICAL TONSIL HEMOSTATICS

By J. W. Jervey, M. D., Greenville, S. C.

Less than a dozen years ago, at a meeting of tne American Laryngological, Rhinological and Otological Society, I had been discussing ligation of bleeding vessels after tonsillectomy, when an able and well-known Northern laryngologist arose and said that it was too difficult a procedure to be used as routine. Shortly after that, at a meeting of the Southern Medical Association in Richmond, I was demonstrating a little appliance I had devised to facilitate such ligations, and in the general discussion following, a Southern laryngologist of good standing and repute observed that the way he stopped hemorrhage after tonsillectomy was to "let it bleed"!

I mention these incidents not as in any way a suggestion that I was the first to employ ligation in the tonsil fossa (though in its use as a routine and systematic procedure I can safely claim to have been "among those present" in the beginning), but simply to emphasize the fact that even so recently as ten or twelve years ago strictly surgical hemostasis was not generally applied to tonsil surgery.

Prior to this many and varied, innocuous and monstrous, and for the most part impotent, were the methods, medicinal and mechanical, used for the control of hemorrhage, in this area, and, *horrible dictu*, some of these methods are in use even in this present enlightened day of our Lord! Only a few days ago I read in a current medical journal a description of a new mechanical device (merely a modification, by the way, of one of the old forms of "tonsil clamp") for the control of the hemorrhage of tonsillectomy, and it was hailed as a great advance in this field. God save the mark!

"Tonsil clamps" of every conceivable shape, size and mode of action have been in use so long that the memory of man runneth not to the contrary. They are as old as the hills, and if I had my way they might all, *all* be buried under the highest of them, and left to everlasting oblivion, there to lie "unwept, unhonored and unsung."

An objection to most tonsil clamps is that, applied to one tonsil, they interfere with the freedom of operative movements directed to the other tonsil. Again, they maintain pressure and interfere with free circulation in an area where at least a normal blood supply is wanted for the prevention of sepsis and the promotion of repair; they are often difficult to keep in place and therefore often inefficient; they are extremely uncomfortable—even painful—to the patient; and one never knows

Read by title before the South Carolina Medical Association, Charleston, S. C., April 19, 1923.

how long they must be retained in position.

So much for real practical objections. I have another—an aesthetic one. A nice-looking patient (and the other kind even more so) looks altogether too unhappy and idiotic with mouth propped open, saliva drooling over the chin, and robbed of articulate speech, to satisfy either the artistic instinct of the properly fastidious and cultivated professional man, or the vanity of the poor fish of a victim. Yet the idea of the clamp has such a strangely compelling hold upon the surgical mind that even I, in times past, have felt the almost irresistible yearning, like every other laryngologist worthy of the name that ever lived, to invent a tonsil clamp; but happily the contemplation of the considerations above was a complete prophylactic success, and thus the world is spared the Jervey tonsil clamp!

Other mechanical devices include the Michel or some similar clamp, various ligatures, and pressure such as is afforded by sponges. The latter we all resort to, of course, and in their application and limitations they are strictly surgical. But the Michel clamp, however useful in other fields, has no proper place, in my humble opinion, in tonsil surgery. It is too large and heavy, too dangerous as regards possible loosening and inspiration.

As to the medical or chemical biological hemostatics, the astringents, organic and inorganic, most of them, in my experience, are as snares and delusions. Epinephrin in its various forms, such as adrenalin, suprarenalin, etc., is invaluable both as a preliminary and as an efficient agent in post-operative oozing. In such cases I use this with tannic acid with great satisfaction. But such a monstrous and horrible, clot-forming and trouble-making, old hemostatic as Monsel's Solution I mention only to condemn as being what the foregoing terms would indicate. Other chemicals and organic preparations are, I think, overrated.

Strictly speaking, and may I say correctly speaking, the surgical control of hemorrhage must always be mechanical. The physical shutting off of the opened end of a blood vessel is not only the desideratum but the demand of good surgery. In tonsil, as in other surgery, this is accomplished quite satisfactorily by ligation. But many find ligation difficult in most cases, and most find it difficult in many cases—for reasons which need not here be expatiated upon.

Neither the suturing together of the pillars, nor the suturing of the pillars over a tampon is an uncommon recourse, but there are very valid objections to both procedures.

What then is the answer?

The Cushing brain clamp.

Some five or six years ago, my friend Oertel, of Augusta, Georgia, spoke to me of this method of control of the hemorrhage of tonsillectomy. It appealed to me. I adopted it experimentally. I have used it ever since, with unceasing joy and never a regret. The bleeding vessel is picked up and the tiny silver wire clamp is applied with the greatest ease and celerity. The result is almost one hundred per cent satisfactory. The tiny clamp is eventually thrown off, expectorated or swallowed—no matter which. If accidentally (possibly never) inspired, it is covered with a slimy mucous coating and is immediately expelled as any other little mucous globule. Occasionally it remains *in situ*, and is a source of minor complaint, when it is easily found and picked off with forceps.

I have here a sample of this little forceps and the little silver wire clamps. They are as simple as they are efficient. Try them and be convinced.

(Demonstration)

HYPERNEPHROMA

By Marion H. Wyman, M. D., Columbia, S. C.

The name hypernephroma was used by Grawitz in 1883 to describe tumors of the kidney which resemble the suprarenal gland in their histological appearance. However, the conclusions of Grawitz that these growths develop from small pieces of aberrant suprarenal tissue is today denied by many pathologists. The name nevertheless is popular, and is accepted to describe the great majority of kidney tumors.

Thompson Walker says: "In recent years it has been shown that carcinoma of the kidney is a rare form of tumor, and that many of the growths formerly regarded as carcinomas belong to the group known as hypernephromas."

Keys states that "Sarcomas of the kidney are extremely rare in the adult, and while the sarcomata compose practically all the renal neoplasms of childhood they are almost exclusively embryonic tumors."

We, therefore, assume in this paper that all new growths of the kidney are malignant, or are potentially so; and, use the name HYPERNEPHROMA as synonymous with MALIGNANT RENAL TUMORS.

Etiologically, nothing is definitely known of these growths and the writer has nc theories to offer as to this cause.

A brief pathological report of a case will be made at the conclusion of this paper.

Symptoms: The cardinal symptoms of hypernephroma are haematuria, and tumor.

Haematuria—is the initial and most constant symptom in the vast majority of adult patients. It is present in over 90% of the cases. The bleeding is characteristically abundant; well mixed urine; spontaneous; intermittent; frequently painless; and is not influenced by motion or rest.

Tumor formation while not usually noted in the adult is the characteristic symptom of renal new growth in children. Authorities are agreed that only about twenty per cent of hypernephroma in the adult cases have noticeable tumor formation. However, it should be emphasized, that tumor-faction is usually the only symptom of renal neoplasm in children until the cancerous cachexia begin to show itself.

Pain from hypernephromas, although commonly present is not characteristic. It may be caused by clots passing down in the ureter. Perhaps the most characteristic pain is a constant dull aching in the loin which is unaffected by movement, and only temporarily relieved by drugs.

Varicocele is frequently observed in these cases, but is not of as much diagnostic and prognostic importance as was once thought.

Diagnosis—No exhaustive differential diagnostic discussion will be attempted here, but just the most important points will be emphasized. The chief clinical types of hypernephroma are:

First—The type characterized by both haematuria and tumor.

Second—The haematuria type without tumor.

Third—The tumor type without haematuria.

Any and all of these types may and usually do have some pain and later general manifestations of cachexia.

The first type of both haematuria and tumor requires little effort to diagnose, but usually here the prognosis is not good because it is apt to be a late condition.

The second type, where the only symptom we have is haematuria, is the type which gives the urologist his best opportunity to exhibit his diagnostic ability and offers the best prognosis for a permanent recovery. It is our duty as physicians to prove that the source of the haematuria is not caused by a malignancy. In other words, if it is assumed that every patient who passes blood

Read before the South Carolina Medical Association Charleston, S. C., April 19, 1923.

in his or her urine is suffering with a urinary malignancy, until it is proven not to be, very few patients will die with primary urinary cancer.

The duty of the *general practitioner,* the physician who usually sees the patient first, is simply to recognize that a person has a haematuria, regard it seriously, and then put the burden of diagnosing the CAUSE and SOURCE of the BLOOD up to the Urologist. The Urologist, by the use of special instruments, such as, the cystoscope and X-Ray, can certainly and quickly locate the source of the hemorrhage and in the vast majority of cases the cause. We wish to restate and emphasize, however, that it is our duty to prove that a haematuria is not due to cancer, for it is by this method of exclusion that we usually diagnose hypernephroma.

The last type in which there is a tumor, but no haematuria, is easier to diagnose than the hemorrhage type, for in addition to the tumor there is usually a lowered kidney function ,the pyelogram shows the outline of the kidney pelvis to be characteristically altered, and then there is serious danger that metastasis has already taken place.

Case report: This case was selected as a type in which haematuria is the only symptom; the most difficult type to diagnose.

White, female, age 51, married.

Complaint—Blood in urine, backache, and at times some pain on urination.

History—Family history negative.

Past history—married twenty-four years, one child stillborn, no miscarriages. Nine years ago patient had gall bladder drained, and an appendectomy performed, otherwise, the patient's past health has been very good.

Present illness began six months previous to the patient's admission to the hospital. She first noticed pains in the pelvis and tenderness in her lower abdomen. Blood was noted in her urine and she was cystoscoped in Richmond, Va., but told that nothing was found to explain her complaint. Since that examination she has been more or less confined to her home and has had frequent attacks of profuse haematuria with some pain, of a colicy nature, in the region of the right kidney.

General physical examination—Blood pressure 208-128. General reflexes practically normal. Heart, aortic second accentuated. Lungs, normal. Mucous membrane, pale. Skin, dry and has greenish, yellowish tinge on extremities.

Abdomen, tender in right upper quadrant, extending around and including right costovertebral angle, with some rigidity of muscles in that region also. UNABLE TO FEEL A TUMOR IN EITHER KIDNEY REGION.

Laboratory report—Urine well mixed with large quantity of free blood which settled to the bottom very slowly; very few pus cells noted in the urine. Culture and stained specimen of the urine were negative for any infecting organism. Hemoglobin 73%. Leucocyte 5,700 per c.mm.

X-ray of urinary tract negative for stone, both kidneys appeared normal in size and position.

Cystoscopic examination—Bladder was normal except for slight congestion around right ureteral orifice from which bloody urine escaped. Both ureters catherized—urine from the left entirely normal, urine from the right shows much blood well mixed with urine. Kidney function, as determined by phthalein, was normal from left kindney; function from right kidney was very much reduced.

Diagnosis—RIGHT SIDED HYPERNEPHROMA WITH A NORMAL KIDNEY ON THE LEFT SIDE.

Remarks—It will be noted that our diagnosis was arrived at principally by exclusion. Tuberculosis and other infections were excluded by not finding pus or other evidence of infection in the urine. The X-ray was negative for stone, and both kidneys appeared normal in size and position. Other causes of haematuria such as;

a drug, chemical, toxic, and traumatic haematuria were excluded by the history and a short observation in the hospital. The so-called idiopathic or essential renal haematuria would always be regarded as an evidence of early malignancy. Now gentlemen, although we did not have a tumor or any positive evidence of malignancy, except the right sided hemorrhage, with a reduction in function nevertheless, we made an unconditional diagnosis of hypernephroma.

Treatment recommended was right sided nephrectomy, because the only possible mistake which could be made in this patient, who was fifty-one years of age, would be to let malignancy gain headway and possibly extended to other parts of the body where surgical interference would be too late to cure.

Dr. Guerry removed this kidney by a trans-peritoneal route through a right rectus incision. The kidney was about normal in size and situated high up under the costal border. On cross section there was an area about the size of a hickory nut found near the mid line in lower half of kidney. The area appeared to be an encapsulated mass resembling a firm blood clot. The remainder of kidney appeared normal. (This encapsulated mass described above was mistaken for an "apoplexy of kidney" by one of the physicians who viewed it.) MICROSCOPICAL SECTION OF THIS KIDNEY PROVED THE CLINICAL DIAGNOSIS OF HYPERNEPHROMA TO BE CORRECT.

DISCUSSIONS

DR. LeGRAND GUERRY (Columbia):

I believe any surgical procedure, to be in the real sense of the word satisfactory and sound, ought to be based on a reasonable understanding of the pathology in the individual case. The question of nephrectomy is of course simply the removal of the kidney, but I think there is a good deal of latitude in choice of method, based on the pathological feature of hypernephroma. As I understand, most of the authorities are agreed from more recent pathological studies, that the metastasis of hypernephroma is primarily through the blood stream. You may have a metastasis through the lymphatics, but the primary metastasis in all probability is through the blood stream. The point I wish to get at is this: The ordinary way of removing a kidney is through a loin incision, with the patient on the side, with the middle of the table raised so as to give maximum separation and room to operate. I never shall forget the first nephrectomy I ever did.

This picture is supposed to be a hypernephroma of the kidney. The dark spot you see is a piece of this malignant tissue projecting into the renal vein. A ligature is shown placed around the renal vein. That is the first case I ever did a very large nephroma in which the kidney was taken out through the loin, and with a great deal of difficulty in handling. I finally had to put a clamp on and cut through the pedicle of the kidney and remove the kidney. To my chagrin, when the kidney was taken out there was a piece of the hypernephroma in the bite of the ligature, and I could feel the piece that had gotten behind the ligature and into the free circulation. It is easy to see that the case was not benefitted by the operation. The point I wish to bring out is this—that I think there is a way of getting around that difficulty, especially in early cases. Instead of going in through a loin incision, an incision through the right rectus muscle is made, the same as you make for the gall bladder, only a little longer, and without paying any attention to the kidney at all, make immediately for the renal vein as the first step, then disregard the kidney completely and ligate the renal vein. When you have done that, you have done all you can to prevent metastasis of the growth into the circulation. Then the artery can be easily ligated. But the first thing is to ligate the renal vein.

DR. N. B. EDGERTON (Columbia):

I would like to stress the importance in haematuria of considering the pathology, as Doctor Wyman has mentioned—to find what causes the haematuria. Also in cases of renal colic the importance of considering malignant pathology, rather than in all cases considering the pathology that of calculus. The diagnosis is particularly that of

differentiation between the various sorts of pathology that could arise, and the three cardinal symptoms of this pathology, which are pain, hemorrhage and tumor. We must consider the most serious condition which the patient could have, rather than the least serious. The diagnosis of this condition depends in most cases on the interpretation of the shadow cast from the injection of shadow-casting fluid into the pelvis of the kidney. The tumor Doctor Guerry has illustrated is on the upper pole of the kidney. In that case the kidney has three calices—upper, middle and lower. In tumors of that sort you would have obliteration of the upper calyx. There is only one thing can give that, and that is post peritonéal tumor. The diagnosis is made in most cases by the injection of shadow-casting fluids, and interpreting the shadows cast on the X-ray film.

In tumors of this sort located on the lower pole, instead of having the ureter coming down in its normal position, it was pushed clear across the spinal column.

DR. B. C. CROWELL (Charleston):

As the result of experiments on white rats it was found that the adrenals were not essential for life. It has been found since that aberrant masses of tissue are common in the human. They occur not frequently in immediate association with the renal gland itself, less frequently in the kidney, in the liver, pancreas, duodenum and various other places. Tumors of the type described today may originate from this aberrant mass of adrenal tissue, and the consensus of opinion today is that they are of adrenal origin.

The point made by Doctor Guerry of ligating the renal vein as a preliminary step. I should consider a very important point. These tumors do metastasize most frequently through the veins. I recall one case I had in which the first sign of tumor was an enlarged left testicle. That was excised and proved eventually to be a metastasis which had passed from the left kidney through the renal vein into the spermatic vein and into the testes. At the time the testes was removed the tumor was relatively small, but in three months there was an infection which killed the patient. At other autopsies in cases of hypernephroma of this kind the tumor was shown in the renal vein up to the right auricle, those vessels being completely filled with metastasis.

DR. M. H. WYMAN (closing):

In the last Journal of the South Carolina Medical Association there was a case of hypernephroma of the suprarenal gland reported, supposed to be caused by trauma. There was also an article on malignancy of the urinary tract, emphasing the importance of diagnosing every case individually.

I was called to see a man over fifty with haematuria. I did not find any pus in the urine when I saw him first. I thought the treatment should be radical and removed the kidney. I am anxious to see what the outcome will be. I do not know.

THE RELATIVE VALUE OF MEDICAL AND SURGICAL TREATMENT OF DUODENAL AND GASTRIC ULCERS.

By A. E. Baker, M. D., Charleston, S. C.

The opinions of medical and surgical advocates on this subject are getting closer and closer together. Both are realizing that the patient must be the first consideration; that each case must be studied and treated individually; that in the treatment, that form of therapy must be employed which is best suited to the patient's special needs and this can only be brought about by a far closer co-operation between internist and surgeon in the study as well as in the treatment of these cases; the result of this co-operation will be to the benefit of the patient, as well as to the physician and surgeon. We shall no longer talk of medicine, versus, surgery, but medicine and surgery in the treatment of gastric and duodenal ulcers. In the past the differences of opinions have been largely due to the different types of ulcer seen by the physician and by the surgeon. Virtually every ulcer is first treated medically, and out of this big group is selected a small group of more serious, resistant, complicated cases, with stenosis or recurrent hemorrhage, which go to the surgeon.

Ochsner says that almost all of the fail-

Read before the South Carolina Medical Association, Charleston, S. C., April 19, 1923.

ures in treatment of the internist ultimately come to the surgeon. Therefore, the type of ulcer which most often come to the surgeon are those which have been cured five or six times medically, and at last have to be cured by surgical operation. It is not necessarily the fault of the physician that medical treatment fails so often; for he knows in many cases nonsurgical treatment has not had a fair chance, as one writer tersely puts it—"The sins of the internist are omissions, those of the surgeon, commissions; short comings in the surgical field are more disastrous to the patient."

It is now recognized that almost all peptic ulcers, in their early history should be treated medically, but when they persist and even recur under good medical management and in spite of the patient observing careful living—when serious and repeated hemorrhages occur, when pyloric obstruction does not yield to good medical management, when there is a reasonable suspicion of malignancy. In all of these cases medical management should not be too long persisted in but should give way to exploratory and surgical therapy. No sympathy should be entertained with the position taken by some gastro-enterologists that all ulcer cases must be treated medically, and that surgical therapy should be put off as long as possible and be regarded as the last resort.

The great value of medical management has been clearly shown, especially by Dr. Sippy and his disciples. They have shown that peptic ulcers can be cured medically in the great majority of patients.

To quote Dr. Bevan, "No more brilliant chapter has been written in the history of surgery than the chapter on gastric and duodenal ulcers." We owe to surgeons most of the knowledge that we have of these ulcers—obtained in the operating room on the living patient and also at autopsies made in the last twenty years. We hardly knew that there was such a thing as a duodenal ulcer twenty years ago. The surgeon first demonstrated its existence and frequency. Many mistakes were made in the development of this subject by the surgeons. They performed too many gastro-enterostomies, they placed too little value on medical treatment. But in spite of mistakes, great progress has been made, and today we feel that if peptic ulcers do not yield to medical care, modern surgery offers much to these patients.

It was not until the surgeon penetrated the abdomen and actually saw the pathologic condition in the form of peptic ulcers that the present understanding of it was reached. Previous to this development of surgery, ninety-six per cent of peptic ulcers were believed to be in the stomach, as a matter of fact only twenty-five per cent are so situated. It was believed that patients with ulcer suffered pain immediately after eating; we now know that temporary relief follows eating. It was believed that hemorrhage was often a sign of peptic ulcers; we know now that it occurs in less than twenty-five per cent of cases.

"The greatest number of sudden hemorrhages from the stomach, which are not preceded and followed by the ordinary symptoms of ulcer, are not caused by ulcer, but by superficial erosions of the gastric mucous membrane due to toxic hepatitis, the result of focal infection ofter originating in the appendix, gall-bladder, teeth, tonsils, etc."

Now in regards to the effects of free hydrochloric acid on ulcers, Dr. Sippy states that "all accumulated evidence has demonstrated that when tissue, lowered in vitality, from any cause, is exposed to the digestive action of gastric juice, the surface of that tissue becomes eroded. The healing of peptic ulcer is retarded or prevented by the eroding action of the gastric juice proportionately to the diminution in the vitality of the tissue exposed in the ulcer". He also says that "as an eroding agent, gastric juice is absolutely inert in the absence of free hydrochloric acid". It is then important to realize that the free hydrochloric acid must be completely neu-

tralized in the treatment of these ulcers.

The beneficial influence of gastro-enterostomy in bringing about a cure of gastric and duodenal ulcers through a reduction in the free hydrochloric acidity from fourteen to thirty per cent. This is the explanation of the wonderful relief of symptoms and the apparent and real cures following successful gastro-enterostomy when applied to ulcer associated with pyloric obstruction.

Because of the acid medium gastric ulcer is prone to malignant degeneration. It has been demonstrated that at least sixty per cent of cancers of the stomach develop on the base of a gastric ulcer; whereas cancer formation never develops on a duodenal ulcer, this ulcer being in an alkaline field—only acid conditions favor cancer degeneration. This explains the expediency of thorough eradication of the gastric ulcer. Balfour's cauterization method is now recognized the technic of choice, in that heat by its penetration destroys any cancerous cells that may be in process of development, yet clinically not recognized —whereas, excision by the knife—all tissue cells involved may not be entirely removed.

When is surgery definitely indicated in the treatment of peptic ulcers? In cases in which despite medical treatment the symptoms of ulcer continue to cause distress or interfere with the patient's efficiency; perforation occurs; physical signs of food stagnation, dilatation, hour glass contraction; hemorrhage, etc.

The recognized surgical procedure is to excise the peptic ulcer under certain conditions—and to do a gastro-enterostomy or a pyloroplasty as conditions may indicate. It has been asked how does gastro-enterostomy cure an ulcer in the stomach and duodenum? This has been answered in several ways. Patterson believes that the important factor in the cure is the neutralization of the acid gastric juice by the alkaline bile and the pancreatic juice which pour into the stomach through the new opening. Bevan believes that the value of a gastro-enterostomy is in the safety valve action of the new opening, the relief of tension. In case of a duodenal ulcer in which the prospects of cure are about 90 per cent he claims that as soon as the gastro-enterostomy is performed, spasm of the Pylorus prevents the gastric contents from passing into the duodenum, and as a result, the gastric juice and food take the course of least resistance and pass out through the new opening. The duodenal ulcer is thus put at rest, is protected from the irritating actions of the gastric contents and wound healing proceeds rapidly until the ulcer is cured. As soon as the ulcer heals the pyloric spasm ceases, in whole or in part, and the gastric contents begin to take the normal course through the pylorus. In the cure of a gastric ulcer by gastro-enterostomy, he believes relief from gastric tension, the free emptying of the stomach and the neutralization of the gastric juice by the bile and pancreatic juice furnish the logical explanation. According to Mayo, "the pathology of duodenal ulcer often differs greatly from that of gastric ulcer, in that the chronic gastric ulcers always have craters; the majority of duodenal ulcers do not have craters, and therefore, often they are not recognized. The gastric ulcers are the callous type, which penetrate all coats of the stomach to the peritoneum. In the duodenal ulcers are usually erosions; little fissures or cracks extend through to the muscular coat and peritoneum, often difficult to observe. Only the minority of duodenal ulcers have true craters and these usually occur on the posterior wall of the duodenum."

Gastro-jejunal ulcer occurs in about 1 to 2 per cent of gastro-enterostomies, but it never develops after a pyloroplasty. The treatment of this ulcer is to cut loose the gastro-enterostomy, close the jejunal and gastric openings, and make a Finney or Horseley pyloroplasty.

Conclusion

It is most essential to neutralize the acid of the gastric juice so as to prevent the irritating digestive effects of the gastric juice on the raw ulcer surface. In the large majority of peptic ulcers, rest of the patient in bed, rest of the stomach and duodenum by Sippy's technic of diet, neutralization of the gastric juice and the improvement of the general condition of the patient will result, in the course of some weeks or possibly several months, in a complete healing of the ulcer. However, there are very definite exceptions to this rule. When an old callous ulcer seriously impairing the function of the stomach, and situated at or near the pylorus, producing obstruction and deformity, complete healing cannot as a rule, be obtained by medical treatment.

The person who has been cured of a peptic ulcer must realize that the price of a permanent cure is eternal vigilance, and this is true whether the cure has resulted from medical management of surgical operation.

Ochsner says "that we should remember that, following any form of surgical treatment for gastric or duodenal ulcer, we have a badly impaired machine, consequently, if you abuse that machine dietetically after the operation, you are bound to have trouble."

Many theories have been advanced as to the etiology of these peptic ulcers. Undoubtedly the chief direct cause is sepsis through the blood stream from some focal infection—Gall-bladder, appendix and teeth are most often the source of this infection.

DISCUSSION:

DR. J. H. CANNON (Charleston):

I do not think there is any doubt that in gastric and duodenal ulcer the treatment should follow the removal of foci of infection. The case should not be considered as merely a case of ulcer, but should be considered in toto, and the treatment applied to the individual and not to the ulcer.

When we consider the cause of ulcer of the stomach or duodenum we find men who constitute authority giving various causes, and they certainly have more or less behind what they say. Therefore, a case, no matter whether treated medically or surgically, that is not cured, is due to the fact that the foci of infection have not been removed, that the patient has not cooperated with you sufficiently, that he has not understood that he is not only afflicted for several weeks, but for years, and even if that individual ulcer is cured, it does not remove the focus of infection and there is no reason why he cannot get another ulcer.

I do not think I can cover the subject any quicker than to read the conclusions of a paper I read before the Medico-Chisurgical Society, and which Dr. Baker was kind enough to discuss.

DR. LeGRAND GUERRY (Columbia):

I think the difference between an operator and a surgeon is that the operator operates every case that comes along, and the surgeon tries to select cases that need operation. That is a distinction we need to think of.

I believe in the medical treatment of duodenal ulcer. But I always get a little worried, because we have gone a long way in this question of gastric and duodenal ulcer, and it has taken a wonderful amount of work to put the thing on a sane basis and develop a technique of operation that will cure nearly 95 per cent of cases. That is the reason I feel apprehensive when we talk about medical treatment of ulcer, and yet I certainly believe that most ulcers will get well under proper medical management. What we plead for is a reasonable and fair trial with palliative measures—I mean a trial that would satisfy a reasonable man. When the internist has treated the case five times, I think he ought to be willing to let the surgeon try it once. When an ulcer is treated medically, there is the responsibility the internist must take—to not put a hopeless case into the hands of the surgeon. If you take a case to the surgeon on which everybody has failed, the case is a miserable risk. These ulcers that are on the stomach side in five to ten per cent of cases become malignant. My position is that it is not fair to the surgeon to be made to carry the burden at the operating table when the internist has taken from him the only thing he cannot afford to lose, and that is time.

While we are treating these cases medically it must be only a reasonably trial, because when you keep a case longer you are exposing it to 5 per cent risk from hemorrhage, 5 per cent risk from perforation, and even greater risk of development of malignancy.

DR. J. S. RHAME (Charleston):

In considering gastric ulcer I think we will all agree that the acute ulcers should receive preliminary medical treatment, but we are reminded by Doctor William Mayo of the fact that advising the man with gastric ulcer to take medical treatment is the same as advising the man with tuberculosis to go to Colorado for cure.

Doctor Guerry mentioned the percentage of ulcers above the pylorus that undergo malignant changes. It has been I think satisfactorily proven that as high as 70 per cent undergo malignant change, and in certain sized ulcers the Roentgenologist is unable to make a definite diagnosis. Consequently, those cases that are chronic I believe should be subjected to proper surgical interference. Of course there are several different methods, but to save these cases from cancer by metastasis we must do something more than treat them five or six times and get a medical cure. I agree with Doctor Guerry that it is not fair to throw the burden on the surgeon at the last. The time is coming when we must pay more attention to the early recognition of ulcers and malignances of the stomach.

DR. H. R. BLACK (Spartanburg):

I want to say that I thoroughly believe that examination, complete examination of these cases should be made. I have recently had two cases that were brought in only when they had every symptom of acute peritonitis. Fortunately, we were able to save both of them. But early diagnosis and early operation will save them; otherwise you will lose quite a number of cases of acute ulcer of the stomach.

DUODENAL ULCER WITH REFERENCE TO ACUTE PERFORATION

By H. S. Black, M. D., Spartanburg, S. C.

Perhaps the most common complaint of ambulatory patients seeking physicians for advice is for gastric distress, but only about 10 per cent of these patients have pathological lesions in the duodenum and stomach. The remaining 90 per cent are not entities but are groups of symptoms resulting from disease of the appendix, gall bladder, pancreas or some systemic condition.

Duodenal ulcer is more common in the middle age. It is four times as frequent in the male than the female. This may be explained by the more nearly transverse position of the duodenum in women allowing bile and pancreatic juice to enter as high in the duodenum as the pylorus. About 95 per cent of the ulcers occur on the anterior wall and within the first 4 cm. The remaining 5 per cent may be located in any other portion of the duodenum.

There are two types of ulcer. In the one there is a definite ulcer with crater formation and thickening and in the other there are definite pin point ulcers in the mucous membrane with little or no induration. Judd has called this the duodenitis type of ulceration in contra-distinction to the true crater ulcer. It is similar histologically to the Hunterian ulcer of the urinary bladder. Judd has also called attention to the presence of the socalled contact ulcers in some 10 or 20 per cent of the cases. These are opposite to the original ulcer.

Following the experiments of Rosenow, how can one question the infectious origin of ulcers? They are embolic infection from some distant foci. One should not lose sight of the fact that the local chemicals may take some secondary part in the formation.

Duodenal ulcer usually begins in the young with a history of belching sour regurgitation and pain coming on from 1 to 3 hours after meals and relieved by food.

Read before the Third District Medical Association, Greenwood, S. C., Oct. 11, 1923.

It is this hunger pain which is relieved by eating that points towards ulcer. The pain is usually in the epigastrium and associated with it, as a rule, a fairly definite tender area which is just to the right of the middle line and above the umbilical level. Nausea and vomiting might be present or absent. As a rule vomiting does not give relief of pain as in a gastric ulcer unless there be obstruction. The attacks of pain usually are seasonal, being worse in the Spring and Fall, though in some cases the symptoms will abate for months and years only to reappear later with obstructive symptoms or other complications.

Time will not allow for a discussion of the differential diagnosis of ulcer, for a discussion of the analysis of the gastric content, and for a discussion of the X-ray findings but it will suffice to say that the X-ray in the hands of an experienced roentenologist is the best single diagnostic means at hand. Carman has been able to make positive diagnosis in about 95% of cases. What other abdominal disease can be diagnosed so accurately as this condition before submitting to the knife?

The treatment of duodenal ulcer still remains divided. The internist tends toward medicine and the surgeon toward surgery. The fact is that there are a few cases that need medical treatment and others that need surgery. Those that have been operated upon should be put on a special diet for several months.

It has been suggested by Mayo that medical treatment should be tried in: 1—young people if they can carry out the ulcer management. 2—patients who have little trouble and who can afford protracted treatment might be given an opportunity for relief afforded by medical therapy. 3—patients classified in dangerous groups for operation as those suffering from diabetes, cardio-renal disease, obesity, etc. 4—patients desperately ill who would succumb to operation might be classed as surgical and medical.

In a debate on ulcer held at the Royal Society of Medicine in England, Bennett believed that the proper method of handling patients with ulcer consists in the immediate treatment of all foci of focal sepsis and an early selection of the cases in which surgery is indicated. Under the latter may be included the following types: 1—all patients with chronic pyloric obstruction. 2—all patients with relapse after a thorough course of medical treatment. 3—all patients with a history extending over many years. 4—all patients with large ulcers adherent to surrounding structure. 5—practically all patients with six hour retention. 6—all patients whose economic situations make prolonged medical treatment impossible.

I believe there are two conditions in which the internist and surgeons agree in regard to treatment. First, that patients suffering with an acute ulcer without complications should have the benefit of medical treatment. Second, that patients with acute perforation and chronic obstruction should be treated surgically.

Most all ulcers seen by the surgeons are of several years standing. Seldom does he see an acute ulcer except where perforation or hemorrhage has occured. In such cases he is called to treat the complications and not the original cause. It is true that few cases die from hemorrhage and perforation but the number dying is greater than the number dying from surgical operation.

Acute hemorrhage from an ulcer is best treated conservatively. The patient is put to bed with absolute rest, given morphia, ice bag to abdomen, etc. In majority of these cases the hemorrahge will stop and the number requiring immediate operation therefore will be scant. If operation becomes necessary, explore and do what is necessary to control the bleeding and no more, for these cases do not stand long operations. Transfusions are indicated in an occasional case.

Unfortunately one is unable to locate the bleeding vessel in some of the cases, as there is a general oozing from the mucous membrane and not from a definite vessel. Remember that the bleeding may not be

from an ulcer but due to disease of the spleen, liver, appendix, etc.

The one complication of duodenal ulcer that demands acute surgical interference is acute perforation in which the intestinal contents are poured free into the abdominal cavity. The acute perforations are usually on the anterior wall where there is little protection. Occasionally the omentum, gall bladder, or transverse colon will become adherent and seal the perforation. This is more common in the chronic type of perforation.

The fact that the duodenal content in these cases have a tendency to gravitate into the region of the appendix, leads one to make the pre-operative diagnosis often that of appendicitis. Not infrequently the appendix is removed and the surgeon because of seeing slight evidences of infection of this organ closes the abdomen thinking the cause of the patients trouble has been removed. The following morning he may be chagrined to find his patient worse and possibly at autopsy a few days later to find a perforated duodenal ulcer.

In regards to the diagnosing of this condition I have only two things to suggest. First, in the majority of cases a history of duodenal ulcer can be elicited and, secondly, there is no other condition which gives such a hard board like rigidity to the abdominal muscles in such a quick time.

Whenever a patient is taken suddenly ill with severe acute abdominal pain 1 to 3 hours after meals, whether there be a previous history of gastric distress or not and where there is marked abdominal rigidity with patient in more or less shock, perforated ulcer should be suspected and at once this case is surgical. The time that these cases become surgical should be before the time of rupture. There is some discussion as to whether the operation should consist of only closure of the opening or closure of the opening and a gastro-enterostomy. Personally, I have no fixed rule, but treat every case as to the condition. I have a hesitancy in closing these cases even when operated a few hours after perforation without drainage though some advocate it.

Within the past few months I have had six cases of acute ulcer perforation. In five of the cases the ulcer was closed and no gastro-enterostomy was due to the serious condition of the patient. In the other case, the perforation was so large and the surrounding tissue so friable that no attempt was made to close it but the omentum was sutured over the opening and a posterio-gastro-enterostomy performed. So far as I can ascertain, this is the first case in which the perforation was closed with the omentum, making no attempt to suture the perforation. Drainage was used in each. There was no mortality. No doubt but some of the cases that only had the perforation closed will have to return later for a gastro-enterostomy.

THE TECHNIQUE OF SPINAL ANESTHESIA

By C. M. Rakestraw, M. D., Chester, S. C.

Reporting seventy-seven complete hysterectomies performed successfully with its use.

The technique of spinal anaesthesia has of late been refined to that degree of scientific nicety that the greater part of the dangers and difficulties urged as arguments against its use have been entirely eliminated and the method now bids fair to become the one of choice in the great majority of surgical procedures.

In truth, a careful study of the history of the procedure elicits the fact that the bad results occured most frequently in the days when cocaine was the drug commonly employed. This drug being of such a high degree of toxicity, so unstable in its physiological effects and so variable in its reaction on different individuals that its dosage was extremely hard to standardize.

Read before the Fifth District Medical Association Camden, S. C., November 8th, 1923.

Then, owing to its susceptibility to heat and moisture, it was impossible to sterilize it and keep it in stock..

In novocaine the above difficulties have all been overcome. With a fusing point of 150° C. it can be autoclaved for a sufficient length of time to insure its thorough sterilization and without effecting in the least its anaesthetic properties while its degree of toxicity is so low that it can be used in sufficient quantity to allow of wide areas of anesthetization without dangerous or distressing reactions.

In preparing novocaine for intra-spinal use the technique is extremely important. In order to avoid the introduction of fine dust particles and other foreign matter into the spinal canal, chemically clean crystals contained in a hermetically sealed ampule, each ampule holding sufficient novocaine for a single anaesthesia must be employed, the ampule of about a 3c. c. capacity to allow the making of a solution of the novocaine directly in the spinal fluid in the ampule.

Due care is also essential in the cleansing and preparation of the needles and syringes in the successful pursuit of the method, for as particles of foreign matter of microscopic size are sufficient, logically, to cause injury to the delicate nerve structure of the cord, extreme care in cleansing the needles and keeping them free of rust, dirt and oil and being certain that the syringe carries no like particles is an important feature of the technique. In effecting this we require an operating room nurse especially trained in this technique or must do it ourselves, and this special cleansing of the apparatus should precede, each operation. After the needles and syringe have been cleansed, or, are what we term *chemically* and *mechanically* clean, they are sterilized in a special sterilizer, a pan used for no other purpose and with the use of distilled water only.

This insures the apparatus against the possibility or having foreign matter deposited upon it by the water, or from other instruments.

The patient is prepared for operation in the usual way with this exception. Whereas, in general anaesthesia we prohibit drinking water to within six or more hours before operation, in this method we encourage the taking of water liberaliy up to within one hour of the operation. The benefit of having a patient well supplied with fluids is self-evident.

One hour before operation the patient is given a hypodermic of morphine one-fourth grain and scopolimine one-one-hundred and fiftieth. The room is then made dark and a special nurse sits at the bedside and perfect quiet insisted upon. Just before the patient is taken to the operating room he is catheterized and a pledget of cotton, saturated in mineral oil, is placed in each ear and a towel laid over his eyes. Patients under the influence of scopolomine ar extremely susceptible at times to light and noise, and as the injection is given to allay all apprehension and fear, extreme caution must be exercised against offering any mental suggestion which is calculated to produce a cerebral or emotional reaction.

In the administration of the novocaine the patient sits on the side of the operating table bending forward with a nurse supporting his head. After the skin preparation and the spine a needle is introduced through the space between the eleventh and twelfth dorsal vertebrae and about ten c. c. of fluid withdrawn. The syringe is then detached from the spinal needle which is left in the canal and another needle attached to it and about three c. c. of the fluid introduced into the ampule containing the novocaine and after this has been thoroughly dissolved, the fluid is again drawn into the syringe and again attached to the needle in the spinal canal. Then by degrees, slowly and gently the spinal fluid now containing the novocaine in solution is returned to the spinal canal by introducing about five c. c. then withdrawning three c. c. then re-injecting five c. c. again withdrawning three c. c. re-injecting five c. c. withdrawning five c. c. and at last emptying the syringe into the canal.

At least two to three minutes should be consumed by this procedure in order to give time for the cord to take up the novocaine and hold it at the desired level. A rapid introduction invites disaster by forcing the novocaine fluid too far up the spinal canal.

The novocaine introduced into the canal the patient is placed in the proper position for operation and the work proceded with.

If it is to be an abdominal procedure the patient can be placed immediately in the Trendelinburg position and the line of incision infiltrated with a one-percent novocaine solution as the nerves supplying the skin frequently come from too high a level for a spinal bloc at the point mentioned to reach.

Knowing the limits of the zone of anaesthesia the use of abdominal packs must be limited to that area. There is little difficulty experienced from this as a rule on the part of the operator and often much benefit is reaped by the patient, excessive packing being often the cause of extensive and avoidable adhesions. Again forcible retraction dragging on the tissues without the zone of anaesthesia can be a source of distress to the patient and render painful a procedure which should be painless and thus bring disrepute upon the method. The above limitations are rather to be desired as they tend to give the patient a better result.

Any operation performed under spinal anaesthesia requires more time and more care as to detail in the preparation of the patient and the apparatus but at the same time it requires a keener knowledge of the nerve supply of a part and a more profound respect for the preservation of this important source of nutrition. It requires a more profound respect for tissue and restrains the surgeon from inducing unnecessary trauma limiting his activities to the field necessarily involved only. It demands of him a nicety and refinement of technique essential to accurate and safe dissection which gives evidence of it's worth in the convalesence of his patients.

The post-operative records of cases operated under spinal anaesthesia show a marked absence of shock due, no doubt to the blocking off of the area of trauma from the nerve centers which meets the indication in the prevention of shock, advocated in Crile's theory of anocci-association. There is almost an entire absence of gas-pains, and seldom any nausea and vomiting. This allows of an immediate return to the taking of fluids and a much earlier taking of food. All of which tends to hasten convalesence and shorten the period of morbidity.

The only cases in which the method is contra-indicated are those with a blood presure below a hundred. These as a rule can be made fit by treatment with the Tr. Digitalis until the pressure is raised to with in safe limits.

In view of the above the method should not be confined to what is considered bad ether risks but is applicable to all cases requiring surgical operation on organs below the pelvic brim.

SUMMARY

In offering a summary to the above I wish to emphasize several points of importance.

When the details of surgical, chemical and mechanical cleanliness are observed in connection with the preparation of the novocaine and instruments and the drug properly placed at the level of the twelfth dorsal interspace, no damage is done the spinal cord in the induction of spinal anaesthesia.

Complete anaesthesia can be induced by the use of .120 Mg. of novocaine lasting from one and one-half hours to two hours, in the region below the pelvic brim.

The method produces less shock than that of general anaesthesia for by blocking the operative area from its nerve centers it prevents damage to the brain, meeting the indications advocated by Crile's theory of anocci-association.

The nature of the procedure demands a more refined technique in a given surgical operation and urges a deeper respect for

the physiological functioning of a part than is usually exercised by the average surgeon, at the same time demanding a keener insight as to the finer anatomy of the part invaded.

Novocaine is the drug of choice because of its low toxicity and the ease and certainty with which it can be sterilized.

The psychic elements such as apprenhension, fear and hysterical tendencies can be controlled with perfect safety by the use of morphine and scopolomine injected before operation.

Cases with low blood pressure can be brought to a point of safety for operation by the use of digitalis.

Our experience with the method in bad surgical risks has taught us that it is the method of choice in the great majority of surgical cases.

The above conclusions have been reached after an experience of seventy-seven complete hysterectomies under spinal anaesthesia.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

THE TREATMENT OF ENURESIS

There is no specific for the treatment of all cases of enuresis; however, when treatment is directed to the underlying cause, beneficial results are usually obtained. In those cases where no definite cause can be found, good results may be attained by employment of various measures.

For the systematic handling of cases of enuresis, two main groups may be considered: 1.—congenital—those in which the normal control has never been gained, —which should be about the end of the second year; 2—acquired—those who have gained normal control but subsequently lost it.

The Congenital Group.—This usually includes children who are suffering from congenital defects, eitehr mental or physical; the mental abnormality may embrace a large number of diseases. Those suffering from this type have practically no chance for improvement unless the defect is due to cretinism or epilepsy. In cretinism, thyroid extract is very beneficial; in epilepsy, luminal or the bromides will do good. Those who have physical defect such as extrophy of the bladder or defective sphincter, have practically no prospects to be cured; fortunately, these cases are rare.

The Acquired Group.—In this group of cases there is often found some obvious exciting cause. This may be pyelitis, cystitis, stone in the urinary tract, tuberculosis of the urinary tract, vulvitis, balanoposthitis, etc. Most careful investigation of the urinary tract in both girls and boys should be made of those who are suffering from enuresis. It is probable that too much stress has heretofore been placed on adenoids, tonsils and intestinal parasites as the cause of enuresis.

In the majority of cases of enuresis no obvious cause can be found. There is a return to the reflex condition of the infant or the normal control had never been attained. The affected boy or girl usually shows no obvious physical or mental abnormality. Various remedies are tried but there is no specific for all. Reeducation, just as practiced in the young child more than a year old, is advisable. The affected one should be made to void at a regular interval during the day and this interval gradually lengthened; at night the incontinence usually occurs within first two or three hours after going to bed, and it is

well to awaken the child within this time. It is not advisable to restrict the intake of fluids. It will take some months to get results from the training method. The administration of belladonna frequently helps; but it must be given in doses large enough to produce physiological effect. Injection of 5 per cent argyrol, neosilvol, or silvol solution into the posterior urethra and bladder will help and relieve some of the cases.

It is highly probable that many cases of enuresis are due to endocrine disturbance. This has been observed in many cases that respond to extracts of the glands of internal secretion. Thyroid extract is indicated in some cases; the pituitary extract —whole gland—given in ten grain doses twice daily as an adult dose—for four days consecutively—and then repeated if necessary after a rest of about one week, has been found to give quick relief from this most distressing condition; it will help or cure about 30 per cent.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

ENTEROSTOMY IN INTESTINAL OBSTRUCTION

Long: *Texas State Journal of Medicine. April* 1923.

Enterostomy in the presence of acute intestinal obstruction is a veritable life saver, when especially indicated.

It is an old operation, performed by Renault in 1763, and later, in 1871, Nelaton and other French surgeons were puncturing the intestine with a trocar for the relief of distention. Since those remote dates but little attention has been given to this operation as a separate entity.

It is indicated in two large groups of cases, first, starvation, and second, obstruction. In the former, where one is slowly perishing or starving for lack of food due to esophageal or gastric obstruction, benign or malignant, a jejunostomy promptly permits nutritive material into the intestinal canal.

Enterostomy is done to prevent and to relieve obstruction, once it has developed.

In intestinal resections, a tube passed into the proximal gut, just above the newly made suture line, permits the escape of gas and fluids, thus lessening the tension on the sutures. This, in our own, as well as in the author's opinion, is a valuable adjunct to intestinal surgery.

In slowly developing obstruction due to encircling stenosis from malignancy, it is valuable as a means to the thorough evacuation of the gut proximal to the site of obstruction. After evacuation has been completed, the patient's condition has improved, a more formidable attack may then be made upon the growth.

In strangulated hernia, where the condition has become critical, it will occasionally turn the tide, and make the relief of the obstruction practical, where to have attempted such at first would only have invited disaster.

Perhaps its greatest field of usefulness is in acute post-operative intestinal obstruction.

When the obstruction is mechanical, it is the operation par excellence. In septic obstruction it is of little avail.

In the former, there is periodic exaggerated paroxysmal attacks of colicky pain with desire to evacute the bowels, and the observer can often see and feel the peristolic waves, as they endeavor to move the obstructing point. In addition ausculta-

tion reveals the gurgling sounds so characteristic of mechanical intestinal obstruction.

In a case of this type, enterostomy or the introduction of a small tube into the lumen of the bowel, proximal to the obstruction, will practically always save the patient unless the surgeon has waited too long before performing the operation.

The author usually enters through the original wound, though any point in the right lower abdomen serves just as well.

The entire operation is done under local anasthesia, and the patient is never moved from his or her bed.

After entering the abdomen, utilize the first distended loop of bowel that comes into view, make it taut, pass purse string suture, and with small cautery puncture within the circle, introduce the tube, anchor it in situ, wrap a fold of omentum around the tube at its site of entrance into bowel, fasten it there with a stitch or two, and close abdominal wall up to and around tube Place the extending end of tube into a bottle to catch the leakage.

The author reports 101 cases with 56 recoveries and 45 deaths.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

BISMUTH SALTS IN THE TREATMENT OF SYPHILIS

Since arsenic in the Ehrlich's compound have failed to vanquish Syphilis as first predicted, other forms of treatment are constantly being tried. Of these the bismuth salts seems to be the most promising and much literature is available on the subject. It may be of interest to give you a short summary of the present status of the therapeutic power of bismuth in the treatment of Syphilis at the present time. The following preparations have been used: bismuth subnitrate, oxide, carbonate, sulphid, phosphate, salicylate, citrate, quinin bismuth, sodium and potassium tartrobismuthate, bismuth hydroxid and quinin bismuth of quinin iodid; also a foreign preparation, the exact formula which is not known, bismogenol. These preparations are all given intramuscularly. It seems that up to the present date no safe method of the intravenous administration of bismuth has been found.

Castello in the Archives of Dermatology and Syphilology in an article entitled "The Value of Bismuth Salts in the Treatment of Syphilis" reports nine cases treated with quinin bismuth iodid. Injections every other day intramuscularly were given beginning with 0.1 gm. and increasing to 0.3 gm. He claims not a single accident in 180 injections and concludes that:

"(1) The bismuth salts have marked antisyphilitic properties.

(2) Quinin bismuth iodid seems to be the compound of choice.

(3) Spirochetes disappear from the chancre and mucous patches after the second or third injection of quinin bismuth iodid.

(4) The primary lesion and all the secondary manifestations heal in a short time, and the general disturbance and headache also disappear after the fourth or sixth injection.

(5) Tertiary lesions respond more slowly, but they finally disappear entirely.

(6) The effect on the Wasserman test is marked. It became negative in seven of nine cases.

(7) Bismuth, in the light of my experience, is entitled to a prominent place

among antisyphilitic remedies. Further experiments will show its real value as compared with the arsenicals and mercurials. Time alone will demonstrate whether bismuth will take the place of the other antisyphilitic or be used in combination with them. It will also show whether the effects are permanent."

Klauder in the Archives of Dermatology and Syphilology, June 1923, gives an exhaustive study of both the chemistry and spirocheticidal effect of bismuth. He employed sodium and potassium tartrobismuthate in aqueus solution and in olive oil and bismuth trioxide in olive oil; same doses as used by Castello. He concludes that as to the spirocheticidal action, bismuth can be placed about midway between mercury and arsphenamin. In this regard, he compares the therapeutic activity of arsphenamin, bismuth and mercury in this way: "The therapeutic activity of arsphenamin is represented by the figure 10, bismuth by the figure 7, and mercury by the figure 4." Further that it should be used particularly in the treatment of syphilitic patients who are hypersensitive to arsphenamin.

Hopkins in the Archives of Dermatology and Syphilology June 1923, in an exhaustive study of bismuth salts on animals and in selected syphilitic patients concludes tartrobismuthate is the most effective salt with Klauder that sodium and potassium in the treatment of Syphilis and place bismuth midway between arsphenamin and mercury in its efficacy in the treatment of Syphilis. He does not expect bismuth to supplant either of the above, but predicts that it will become a distinct factor in the treatment of certain cases.

"Bismuth preparations in the treatment of syphilis." Journal American Medical Association, Chicago, August 25th. 1923, p. 661, the author concludes that Bismuth treatment is not usually injurious if the necessary precautions (observations for beginning stomatitis, examination of urine, etc.) are observed. Intravenous injection is to be strictly avoided. The therapeutic effect of bismuth is rated by the majority of authors between arsphenamin and mercury. Bismuth compounds may be valuable in cases in which the patients are intolerant to the other drugs used in the treatment of syphilis or resistant to them, as shown by a persistent positive Wasserman reaction.

"Bismuth therapy in hereditary syphilis." M. Cajal and H. Spierer. Presse medicale, Paris, April 18th. 1923, p. 354.

"(1) Bismuth may be used without inconvenient results on syphilitis children.

(2) There is no contra-indication to bismuth treatment in children with inherited syphilis.

(3) It is in the form of trepol (oily suspension of tartrobismuthate of potassium and sodium) that bismuth is most to be recommended for children, since it is active without being painful."

"Bismuth treatment in syphilis." (Bismogenol). Richard Neuendorff. Dermatologische Wochenschrifte Leipzig, April 7, 1923, p. 301.

Treatment of syphilis with Bismogenol showed in 43 cases a disappearance of apparent manifestations. The preparation is not without toxic effects for four cases were observed with severe kidney symptoms. Therefore, in its use great care is necessary and further research must show how these dangers can be avoided. The effect o nthe Wasserman reaction was very slow.

It must be said that bismuth will take its place with mercury when it is possible to reduce to a minimum the danger of injury to the kidneys. What preparation is best, time will show. Trial is being made with intravenous treatment.

It is reasonably concluded from the above studies that bismuth has a decided place in the treatment of Syphilis; that in some cases its use is indicated in conjunction with arsphenamin and mercury, but that it cannot take the place of either drug in the light of the present knowledge.

SOCIETY REPORTS

THIRD DISTRICT MEETING AT GREENWOOD OCTOBER 11, 1923.

A wonderfully successful meeting of the Third District Medical Society was held at Greenwood, October 11th. In the morning at the splendidly equipped Greenwood hospital the following clinics were held:

In the large operating room:

Hysterectomy—Dr. Neel.

Hysterectomy—Dr. Turner.

Breast Amputation—Dr. Fuller.

In the small operating room:

Herinotomy—Dr. Turner.

Breast Amputation—Dr. Scurry.

Appendectomy—Dr. Scurry.

Tonsillectomy—Dr. Turner.

Dinner was served at the Community Hall at 2 P. M.

MENU

Oyster Cocktail

Queen Olives Mixed Pickles

Roast Turkey

Oyster Dressing Giblet Gravy

Cranberries

Rice Macaroni Pie

Candied Yams

Hot Rolls Butter

Lettuce and Tomato Salad

Mayonnaise Dressing

Snowflake Crackers

Ambrosia Angel Cake

Coffee

Cigars Cigarettes

After dinner the following papers were read:

DR. GEO. P. NEEL,
---------- Blood Transfusion.

DR. JAMES M. KIBLER,
---------Acute Infective Osteomyelitis.

DR. C. H. BLAKE,
---------- Renal Calculus.

DR. HUGH BLACK,
----------Surgical Subject.

DR. R. M. FULLER,
----------Gall-Bladder Conditions.

DR. B. O. WHITTEN,
-------Where Physicians Should Lead.

DR. E. PAUL KNOTTS,
---------- Educating Laymen.

C. C. Gambrell, Secretary.

MINUTES

MINUTES HOUSE DELEGATES
(Continued)

Mr. President, and Gentlemen of South Carolina Medical Association:—

Your committee on Necrology beg to report today, sorrowfully, the passing of a large number of our co-workers during the past year. Some of these who have passed had reached an advanced age and had given to their respective communities many years of faithful and unstinted service, many were in the prime of life and had barely reached the zenith in their profession when the merciless hand of death beckoned them come.

We are unable to speak of the many virtues of each one, but we can say that they were men held high in the esteem and affection of those whom they served.

We wish that time permitted us to eulogize each brother, but as we are unable to do this we beg only to report their demise, give their residence. age, graduation and date of death.

In making up this report, we may have unintentionally omitted some names, and if we have we would be glad to have you call our attention to such omissions and we will be glad to incorporate same in this report.

Those who have fallen from our ranks, are as follows:

Frances Asbury Coward, died December 1, 1922 of Acute Bulbar Paralysis. He was born at York, S. C. He was graduated from the Citadel in 1896 and form the Medical College of the State of South Carolina in 1900. Dr. Coward was the founder of the Laboratory of the State Board of Health of South Carolina.

William A. Ross, Forkshoals, S. C.; Southern Medical College. Atlanta, Ga., 1892; member of the South Carolina Medical Association; aged 56; died at Greenville. January 30, from heart disease.

Alonzo E. Clough, Madison, S. C.; College of Physicians and Surgeons, Keokuk. Iowa. 1878; formerly served as chairman of the Republican state committee; died, February 26.

Miles J. Walker, York. S. C.; Louisville, (Ky.) Medical College, 1879; member of the South Carolina Medical Association; member of the state board of health; died, July, 11, aged 65, at a hospital in Richmond.

Enos Walter Dickson Wright, Langley, S. C.; Baltimore Medical College, 1894; aged 50; died, December 4, at the Margaret Wright Hospital, Augusta, Ga., from a fractured skull, received when the automobile in which he was driving was struck by a train.

Absolom Jerome Christopher, Laurens, S. C.; Atlanta Medical College, Atlanta, Ga., 1888; member of the South Carolina Medical Association; died, January 11, at Rochester, Minn., following an operation.

Frank Kennedy Holman, Sumter, S. C.; University of Pennsylvania School of Medicine, Philadelphia, 1901; member of the South Carolina Medical Association; was found dead, February 23, in his bathroom, from phenol poisoning presumably self-inflicted, aged 46.

Joseph Evans Brunson, Ninety Six, S. C.; University of Georgia Medical Department, Augusta, 1892; member of the South Carolina Medical Association; died, February 20, aged 72.

Robert Leroy Douglass, Rodman, S. C.; Medical College of the State of South Carolina, Charleston, 1890; died, September 13, aged 56, from cerebral hemorrhage.

George W. Heinitsh, Spartanburg, S. C.; Jefferson Medical College, Philadelphia, 1879; member of the South Carolina Medical Association; died, April 4, aged 63.

Robert Charles McManus, Lancaster, S. C.; Medical Department of the University of the City of New York, 1881; died, August 9, aged 63, from carcinoma of the stomach.

William J. Holloway, Chappells, S. C.; University of Georgia Medical Department, Augusta, 1868; aged 77; died, December 28.

Robert A. Lancaster, Columbia, S. C.; Medical College of Virginia, Richmond, Va., 1882; member of the South Carolina Medical Association; at one time president of the Florida Medical Association; died, October 16, aged 62, from cerebral hemorrahge.

John M. Crenshaw, Liberty, S. C.; Atlanta Medical College, Atlanta, Ga., 1882; died June 2, age 65.

Joseph B. Du Rant, Lake City, S. C.; University of the South Medical Department, Sewanee, Tenn., 1900; age 46; died, December 8, from influenza and pneumonia.

Lawrence Whiteford Nettles, Camden, S. C.; College of Physicians and Surgeons, Baltimore, 1885; died, June 26, age 69.

Walter C. Hemingway, Hemingway, S. C.; Medical College of the State of South Carolina, Charleston, 1900; died, June 3, age 45, from burns received in the explosion of a gasoline tank when he was sterilizing some instruments.

Butler W. Cobb, Greenwood, S. C.; University of Georgia Medical Department, Augusta, 1885; age 70; died, January 2.

Rufus Berley Epting, Greenwood, S. C.; University of Maryland School of Medicine, Baltimore, 1885; age 65; died, February 18.

Theodore Elliott Wannamaker, Jr., Cheraw, S. C.; Jefferson Medical College of Philadelphia, 1906; age 41; died, March 13.

James Woods Babcock, Columbia, S. C.; Medical School of Harvard University, Boston, 1886; died, March 4. Dr. Babcock was born in Chester, S. C., Aug. 11, 1856; received his A. B. from Harvard University, 1882; former president of the National Association for the Study of Pellagra; for the past ten years proprietor of the Waverley Sanitarium, Columbia; chairman of the South Carolina State Hospital Commissions; member of the Columbia Board of Health; professor of psychiatry, Medical College of the State of South Carolina, 1915; member of the American Medico-Psychological Association and the South Carolina Historical Society. He published monographs on insanity, and wrote, with C. H. Lavinder, the first treatise on pellagra in English.

Pettus Gray Ellesor, Newberry, S. C.; Medical College of the State of South Carolina, Charleston, S. C., 1894; member of the South Carolina Medical Association; died, August 14, age 53.

J. D. S. Fairey, Orangeburg, S. C.; Medical College of the State of South Carolina, 1884; died, September 13, age 62.

James Jeter Glenn, York, S. C.; Medical College of the State of South Carolina, 1910; died, March 1, age 34, from pneumonia.

Walter D. Nicholson, Columbia, S. C.; Medical College of the State of South Carolina, Charleston, S. C., 1860; Civil War veteran; age 87 ;died, October 6, at the Confederate Soldiers' Home, from rheumatic fever.

John Robert Coleman, Shelton, S. C.; Medical College of the State of South Carolina, Charleston, 1887; died, July 24, age 57, at the Pryor Hospital, Chester, from lymphatic leukema.

James M. McCallum, Leeds, S. C.; Medical College of the State of South Carolina, Charleston, 1859; Confederate veteran; age 87; died, January 21, from senility.

James Carlisle Harmon, McCormick, S. C.; Jefferson Medical College, Philadelphia, 1918; served in the M. C., U. S. Army, during the World War, with Jefferson Hospital Medical Unit; age 28; died, November 26, at Bryn Mawr, Pa., from septicemia.

Wiley H. Young, Clinton, S. C.; Atlanta Medical College, Atlanta, Ga., 1887; died, May 13, age 63, from cerebral hemorrhage.

Stephen D. Doar, McClellanville, S. C.; Medical College of the State of South Carolina, Charleston, 1860; Civil War veteran; age 85; died, January 29, of senility.

Arthur Magill Buchanan, McColl, S. C.; University of the South Medical Department (Sewanee Medical College), Sewanee, Tenn., 1904; member of the Tennessee State Medical Association; died suddenly, November 5, age 41, from acute dilatation of the heart.

L. Theophilus Hill, Abbeville, S. C.; University of Maryland School of Medicine, Baltimore, 1882; member of the South Carolina Medical Association; also a druggist; age 70; died, December 26, from cerebral hemorrhage.

Benjamin F. Few, Greer, S. C.; Medical College of the State of South Carolina, Charleston, 1861; Civil War veteran; also a druggist; age 93; died, January 21, from senility.

Simon P. Rentz, Branchville, S. C.; University of Maryland School of Medicine, Baltimore, 1891; died, March 22, when the car in which he was riding overturned and his neck was broken.

James J. Wingard, Lexington, S. C.; University of Virginia Department of Medicine, Charlottesville, 1895; age 58; died, December 4.

Theron Earl Roe, Tigerville, S. C.; College of Physicians and Surgeons, Baltimore, 1910; died suddenly, May 11, age 34, from cerebral hemorrhage.

These my friends have fought a good fight and we believe they kept the Faith, and are now enjoying the rest and the blessing promised to such:

"And they no longer weep,
Here, where complaint is still;
And they no longer feel
Here where all gladness flies;
And, by the Cypress
Softly O'er shadowed
Until the Angel
Calls them, they Slumber."

Signed
Robt. A. Marsh M. D., Chairman,
J. B. Setzler,
T. A. Pitts.

Calcreose

In Bronchitis and Tuberculosis

Calcreose is particularly suitable as an adjunct to other remedial measures. **Calcreose** contains 50% creosote in combination with calcium. **Calcreose** has all the pharmacologic activity of creosote but is free from untoward effects even when taken in large doses for long periods of time.

Sample 4 grain tablets supplied to physicians upon request.

THE MALTBIE CHEMICAL CO., NEWARK, N. J.

The Management of an Infant's Diet

Malnutrition, Marasmus, Infantile Atrophy, Athrepsia

Mellin's Food	**8 level tablespoonfuls**
Skimmed Milk (1% fat)	**9 fluidounces**
Water	**15 fluidounces**

This mixture contains 56.61 grams of carbohydrates, thus supplying material that is utilized rapidly for heat and energy. The predominating carbohydrate is MALTOSE, which has the highest point of assimilation of any of the sugars, is immediately available as fuel and may be safely given in comparatively large amounts. The daily intake of protein from the employment of this formula is 15.54 grams, an amount calculated to be sufficient to replace depleted tissues and to provide for new growth. There is present in the mixture 4.32 grams of salts for replenishing inorganic elements.

The suggested modification furnishes nutrition in keeping with the character and amount of food elements best adapted to the particular demands of infants in an extreme state of emaciation and serves well as a starting point in attempting to meet the nutritive requirements of these undernourished babies.

Mellin's Food Co., 177 State Street Boston, Mass.